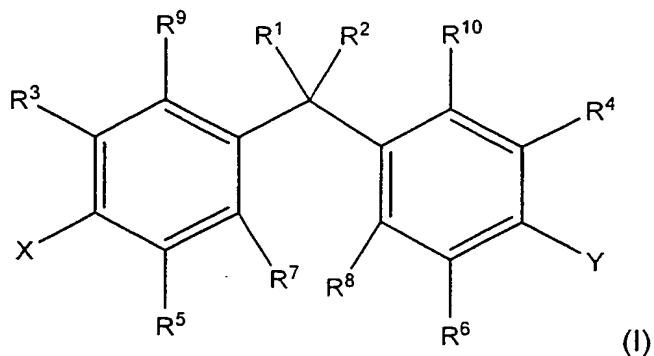


## CLAIMS

WHAT IS CLAIMED IS:

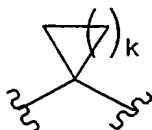
1. A compound having the formula (I):



wherein:

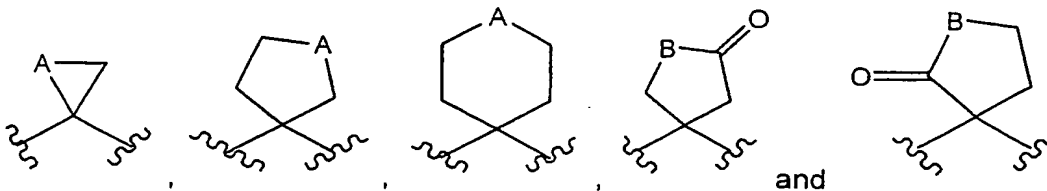
$R^1$  and  $R^2$  are each independently halo, haloalkyl, pseudohalo, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl or optionally substituted heteroaryl; or

$R^1$  and  $R^2$ , together with the carbon atom to which they are attached, form an optionally substituted cycloalkyl consisting of:



wherein k is an integer from 1 to 6; or

$R^1$  and  $R^2$ , together with the carbon atom to which they are attached, form an optionally substituted heterocyclyl selected from a group consisting of:



wherein A is  $-O-$ ,  $-NR^x-$ ,  $-S-$ ,  $-S(O)-$  or  $-S(O)_2-$  wherein  $R^x$  is hydrogen, alkyl, haloalkyl, cycloalkyl, heterocyclyl, aryl, heteroaryl,  $-R^{14}-C(J)R^{15}$ ,  $-R^{14}-C(J)OR^{15}$ ,  $-R^{14}-C(J)R^{16}OR^{15}$ ,  $-R^{14}-C(J)SR^{16}$ ,  $-R^{14}-C(J)N(R^{18})R^{19}$ ,  $-R^{14}-C(J)N(R^{17})N(R^{18})R^{19}$ ,  $-R^{14}-C(J)N(R^{17})S(O)_pR^{20}$ ,  $-R^{14}-S(O)_pN(R^{18})R^{19}$  or  $-R^{14}-S(O)_pR^{20}$ ; and wherein B is  $-O-$ ,  $-S-$  or  $-NR^y-$  wherein  $R^y$  is

hydrogen, alkyl, haloalkyl, aryl or heteroaryl; and wherein each p is independently 0 to 2;

$R^3$  and  $R^4$  are each independently hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, halo, pseudohalo, haloalkyl, nitro, cyano, azido,  $-R^{14}-R^{15}$ ,  $-R^{14}-N(R^{18})R^{19}$ ,  $-R^{14}-SR^{15}$ ,  $-R^{14}-OC(J)R^{15}$ ,  $-R^{14}-NR^{17}C(J)R^{15}$ ,  $-R^{14}-OC(J)N(R^{18})R^{19}$ ,  $-R^{14}-NR^{17}C(J)N(R^{18})R^{19}$ ,  $-R^{14}-NR^{17}C(J)OR^{15}$ ,  $-R^{14}-C(J)R^{15}$ ,  $-R^{14}-C(J)OR^{15}$ ,  $-R^{14}-C(J)SR^{16}$ ,  $-R^{14}-C(J)N(R^{18})R^{19}$  or  $-R^{14}C(J)N(R^{17})N(R^{18})R^{19}$ ;

$R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$ ,  $R^9$ ,  $R^{10}$  are each independently hydrogen, halo, hydroxy, amino, pseudohalo, cyano, nitro, alkyl, haloalkyl, alkoxy or haloalkoxy;

X is  $R^{25}$ ;

Y is independently  $R^{30}$ ,  $-OR^{31}$ ,  $-SR^{32}$  or  $-N(R^{33})(R^{34})$ ;

$R^{25}$  and  $R^{30}$  are each independently selected from (i) or (ii) as follows:

(i) optionally substituted alkyl that may be substituted with one to ten substituents each independently selected from a group consisting of halo, pseudohalo, nitro, cyano, thioxo, azido, amidino, guanidino, optionally substituted cycloalkyl, optionally substituted cycloalkylalkyl, optionally substituted heterocyclyl, optionally substituted heterocyclylalkyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaryl, optionally substituted heteroaralkyl,  $-OR^{15}$ ,  $-OR^{16}OR^{15}$ ,  $-N(R^{18})R^{19}$ ,  $-N(R^{17})N(R^{18})R^{19}$ ,  $-SR^{15}$ ,  $-SR^{16}SR^{15}$ ,  $-N(R^{17})N(R^{17})S(O)_pR^{20}$ ,  $-OC(J)R^{15}$ ,  $-NR^{17}C(J)R^{15}$ ,  $-OC(J)N(R^{18})R^{19}$ ,  $-NR^{17}C(J)N(R^{18})R^{19}$ ,  $-NR^{17}C(J)OR^{15}$ ,  $-OC(J)OR^{15}$ ,  $-P(R^{21})_2$ ,  $-P(O)(R^{21})_2$ ,  $-OP(O)(R^{21})_2$ ,  $-C(J)R^{15}$ ,  $-C(J)OR^{15}$ ,  $-C(J)SR^{16}$ ,  $-C(J)N(R^{18})R^{19}$ ,  $-C(J)N(R^{17})N(R^{18})R^{19}$ ,  $-C(J)N(R^{17})N(R^{17})S(O)_pR^{20}$ ,  $-C(R^{17})=NOR^{15}$ ,  $-C(R^{17})=NR^{17}$ ,  $-C(R^{17})=NN(R^{18})R^{19}$  and  $-C(=NR^{17})N(R^{18})R^{19}$ ; or

(ii) optionally substituted alkenyl or optionally substituted alkynyl, either of which may be substituted with one to ten substituents each independently selected from a group consisting of oxo, thioxo, halo, pseudohalo, nitro, cyano, azido, amidino, guanidino,  $-OR^{15}$ ,  $-OR^{16}OR^{15}$ ,  $-N(R^{18})R^{19}$ ,  $-N(R^{17})N(R^{18})R^{19}$ ,  $-SR^{15}$ ,  $-SR^{16}SR^{15}$ ,  $-S(O)_pR^{20}$ ,  $-N(R^{17})S(O)_pR^{20}$ ,  $-N(R^{17})N(R^{17})S(O)_pR^{20}$ ,  $-OC(J)R^{15}$ ,  $-NR^{17}C(J)R^{15}$ ,  $-OC(J)N(R^{18})R^{19}$ ,  $-NR^{17}C(J)N(R^{18})R^{19}$ ,  $-NR^{17}C(J)OR^{15}$ ,  $-OC(J)OR^{15}$ ,  $-P(R^{21})_2$ ,  $-P(O)(R^{21})_2$ ,  $-OP(O)(R^{21})_2$ ,  $-C(J)R^{15}$ ,  $-C(J)OR^{15}$ ,  $-C(J)SR^{16}$ ,  $-C(J)N(R^{18})R^{19}$ ,  $-C(J)N(R^{17})N(R^{18})R^{19}$ ,  $-C(J)N(R^{17})S(O)_pR^{20}$ ,  $-C(J)N(R^{17})N(R^{17})S(O)_pR^{20}$ ,  $-C(R^{17})=NOR^{15}$ ,  $-C(R^{17})=NR^{17}$ ,  $-C(R^{17})=NN(R^{18})R^{19}$ ,  $-C(=NR^{17})N(R^{18})R^{19}$ , alkyl, haloalkyl, cycloalkyl, heterocyclyl, aryl and heteroaryl;

$R^{31}$ ,  $R^{32}$ ,  $R^{33}$  and  $R^{34}$  are each independently optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl or optionally substituted cycloalkyl; all of which may be optionally substituted with one to ten substituents each

independently selected from a group consisting of oxo, halo, pseudohalo, nitro, cyano, azido, amidino, guanidino,  $-OR^{15}$ ,  $-OR^{16}OR^{15}$ ,  $-N(R^{18})R^{19}$ ,  $-N(R^{17})N(R^{18})R^{19}$ ,  $-SR^{15}$ ,  $-SR^{16}SR^{15}$ ,  $-S(O)_pR^{20}$ ,  $-N(R^{17})S(O)_pR^{20}$ ,  $-N(R^{17})N(R^{17})S(O)_pR^{20}$ ,  $-OC(J)R^{15}$ ,  $-NR^{17}C(J)R^{15}$ ,  $-OC(J)N(R^{18})R^{19}$ ,  $-NR^{17}C(J)N(R^{18})R^{19}$ ,  $-NR^{17}C(J)OR^{15}$ ,  $-OC(J)OR^{15}$ ,  $-P(R^{21})_2$ ,  $-P(O)(R^{21})_2$ ,  $-OP(O)(R^{21})_2$ ,  $-C(J)R^{15}$ ,  $-C(J)OR^{15}$ ,  $-C(J)SR^{16}$ ,  $-C(J)N(R^{18})R^{19}$ ,  $-C(J)N(R^{17})N(R^{18})R^{19}$ ,  $-C(J)N(R^{17})S(O)_pR^{20}$ ,  $-C(J)N(R^{17})N(R^{17})S(O)_pR^{20}$ ,  $-C(R^{17})=NOR^{15}$ ,  $-C(R^{17})=NR^{17}$ ,  $-C(R^{17})=NN(R^{18})R^{19}$ ,  $-C(=NR^{17})N(R^{18})R^{19}$ , alkyl, cycloalkyl, heterocyclyl, aryl and heteroaryl, and  $R^{34}$  can additionally be hydrogen;

where each  $R^{14}$  is independently a direct bond or alkylene;

where each  $R^{15}$  and  $R^{17}$  is independently hydrogen, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl or optionally substituted heteroaryl, all of which, when substituted, are substituted with one to five substituents each independently selected from halo, cyano, hydroxy and amino;

where each  $R^{16}$  and  $R^{20}$  is independently optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl or optionally substituted heteroaryl, all of which, when substituted, are substituted with one to five substituents each independently selected from halo, hydroxy, alkoxy and amino; and

where each  $R^{18}$  and  $R^{19}$  is independently hydrogen, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl or optionally substituted heteroaryl, all of which, when substituted, are substituted with one to five substituents each independently selected from halo, hydroxy, alkoxy and amino;

or where  $R^{18}$  and  $R^{19}$ , together with the nitrogen atom to which they are attached, form a heterocyclyl or heteroaryl;

each  $R^{21}$  is independently alkyl,  $-OR^{22}$  or  $-N(R^{23})R^{24}$ ;

$R^{22}$  is hydrogen, alkyl, haloalkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl or aralkyl;

$R^{23}$  and  $R^{24}$  are each independently hydrogen, alkyl, haloalkyl, alkenyl, alkynyl or cycloalkyl;

or  $R^{23}$  and  $R^{24}$ , together with the nitrogen atom to which they are attached, form a heterocyclyl or heteroaryl;

each J is independently O or S;

as a single isomer, a mixture of isomers, or as a racemic mixture of isomers;  
as a solvate or polymorph; or as a prodrug or metabolite; or as a pharmaceutically acceptable salt thereof;

provided that when R<sup>1</sup> and R<sup>2</sup> form a substituted cyclohexyl, said cyclohexyl, when substituted at the 4-position relative to the gem-diaryl substituents, is substituted with a substituent selected from the group consisting of halo, cyano, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted aryl and optionally substituted heteroaryl; and

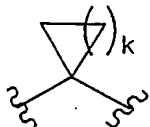
provided that neither R<sup>25</sup> nor R<sup>30</sup> is:

- CH<sub>2</sub>COOH;
- CH<sub>2</sub>-5-tetrazolyl;
- CH<sub>2</sub>COOMe;
- CH<sub>2</sub>COOEt;
- CH<sub>2</sub>NH(CH<sub>2</sub>COOH);
- CH<sub>2</sub>N(C(O)Me)(CH<sub>2</sub>COOH);
- CH<sub>2</sub>-N-pyrrolidin-2-one;
- CH<sub>2</sub>-(1-methylpyrrolidin-2-one-3-yl);
- CH<sub>2</sub>COOH;
- CH<sub>2</sub>C(O)NH<sub>2</sub>;
- CH<sub>2</sub>C(O)NMe<sub>2</sub>;
- CH<sub>2</sub>C(O)NHMe;
- CH<sub>2</sub>C(O)-N-pyrrolidine;
- CH(OH)COOH;
- CH(OH)C(O)NH<sub>2</sub>;
- CH(OH)C(O)NHMe;
- CH(OH)C(O)NMe<sub>2</sub>;
- CH(OH)C(O)NEt<sub>2</sub>;
- CH<sub>2</sub>CH<sub>2</sub>COOH;
- CH<sub>2</sub>CH<sub>2</sub>COOMe;
- CH<sub>2</sub>CH<sub>2</sub>COOEt;
- CH<sub>2</sub>CH<sub>2</sub>COOMe;
- CH<sub>2</sub>CH<sub>2</sub>COOEt;
- CH<sub>2</sub>CH<sub>2</sub>C(O)NH<sub>2</sub>;
- CH<sub>2</sub>CH<sub>2</sub>C(O)NHMe;
- CH<sub>2</sub>CH<sub>2</sub>C(O)NMe<sub>2</sub>; or
- CH<sub>2</sub>CH<sub>2</sub>-5-tetrazolyl.

2. The compound of Claim 1 wherein:

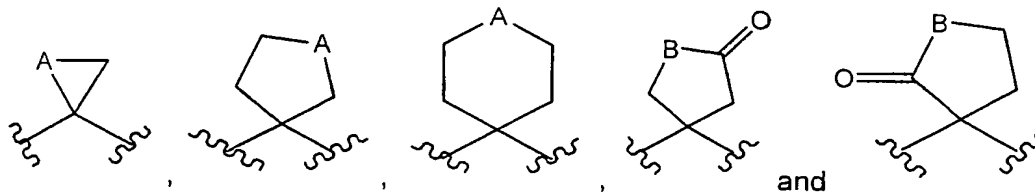
$R^1$  and  $R^2$  are each independently halo, haloalkyl, pseudohalo, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl or optionally substituted heteroaryl; or

$R^1$  and  $R^2$ , together with the carbon atom to which they are attached, form cycloalkyl consisting of:



wherein  $k$  is an integer from 1 to 6; or

$R^1$  and  $R^2$ , together with the carbon atom to which they are attached, form an optionally substituted heterocyclyl selected from a group consisting of:



wherein A is  $-O-$ ,  $-NR^x-$ ,  $-S-$ ,  $-S(O)-$  or  $-S(O)_2-$  wherein  $R^x$  is hydrogen, alkyl, haloalkyl, cycloalkyl, heterocyclyl, aryl, heteroaryl,  $-R^{14}-C(J)R^{15}$ ,  $-R^{14}-C(J)OR^{15}$ ,  $-R^{14}-C(J)R^{16}OR^{15}$ ,  $-R^{14}-C(J)SR^{16}$ ,  $-R^{14}-C(J)N(R^{18})R^{19}$ ,  $-R^{14}-C(J)N(R^{17})N(R^{18})R^{19}$ ,  $-R^{14}-C(J)N(R^{17})S(O)_pR^{20}$ ,  $-R^{14}-S(O)_pN(R^{18})R^{19}$  or  $-R^{14}-S(O)_pR^{20}$ ; and wherein B is  $-O-$ ,  $-S-$  or  $-NR^y-$  wherein  $R^y$  is hydrogen, alkyl, haloalkyl, aryl or heteroaryl; and wherein each  $p$  is independently 0 to 2;

$R^{25}$  and  $R^{30}$  are each independently selected from (i), (ii) or (iii) as follows:

(i) optionally substituted alkyl that may be substituted with one to ten substituents each independently selected from a group consisting of halo, pseudohalo, nitro, cyano, thioxo, azido, amidino, guanidino, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, optionally substituted heteroaryl, optionally substituted heteroaralkyl,  $-OR^{15}$ ,  $-OR^{16}OR^{15}$ ,  $-N(R^{18})R^{19}$ ,  $-N(R^{17})N(R^{18})R^{19}$ ,  $-SR^{15}$ ,  $-SR^{16}SR^{15}$ ,  $-N(R^{17})N(R^{17})S(O)_pR^{20}$ ,  $-OC(J)R^{15}$ ,  $-NR^{17}C(J)R^{15}$ ,  $-OC(J)N(R^{18})R^{19}$ ,  $-NR^{17}C(J)N(R^{18})R^{19}$ ,  $-NR^{17}C(J)OR^{15}$ ,  $-OC(J)OR^{15}$ ,  $-P(R^{21})_2$ ,  $-P(O)(R^{21})_2$ ,  $-OP(O)(R^{21})_2$ ,  $-C(J)R^{15}$ ,  $-C(J)SR^{16}$ ,  $-C(J)N(R^{17})N(R^{18})R^{19}$ ,  $-C(J)N(R^{17})N(R^{17})S(O)_pR^{20}$ ,  $-C(R^{17})=NOR^{15}$ ,  $-C(R^{17})=NR^{17}$ ,  $-C(R^{17})=NN(R^{18})R^{19}$  and  $-C(=NR^{17})N(R^{18})R^{19}$ ;

(ii) substituted propyl, substituted butyl or substituted pentyl, wherein said optionally substituted propyl, said optionally substituted butyl or said optionally substituted pentyl can additionally be substituted with substituents selected from the group consisting of  $-C(J)OR^{15}$ ,  $-C(J)N(R^{18})R^{19}$  and optionally substituted heteroaryl; or

(iii) optionally substituted alkenyl or optionally substituted alkynyl, either of which may be substituted with one to ten substituents each independently selected from a group consisting of oxo, thioxo, halo, pseudohalo, nitro, cyano, azido, amidino, guanidino,  $-OR^{15}$ ,  $-OR^{16}OR^{15}$ ,  $-N(R^{18})R^{19}$ ,  $-N(R^{17})N(R^{18})R^{19}$ ,  $-SR^{15}$ ,  $-SR^{16}SR^{15}$ ,  $-S(O)_pR^{20}$ ,  $-N(R^{17})S(O)_pR^{20}$ ,  $-N(R^{17})N(R^{17})S(O)_pR^{20}$ ,  $-OC(J)R^{15}$ ,  $-NR^{17}C(J)R^{15}$ ,  $-OC(J)N(R^{18})R^{19}$ ,  $-NR^{17}C(J)N(R^{18})R^{19}$ ,  $-NR^{17}C(J)OR^{15}$ ,  $-OC(J)OR^{15}$ ,  $-P(R^{21})_2$ ,  $-P(O)(R^{21})_2$ ,  $-OP(O)(R^{21})_2$ ,  $-C(J)R^{15}$ ,  $-C(J)OR^{15}$ ,  $-C(J)SR^{16}$ ,  $-C(J)N(R^{18})R^{19}$ ,  $-C(J)N(R^{17})N(R^{18})R^{19}$ ,  $-C(J)N(R^{17})S(O)_pR^{20}$ ,  $-C(J)N(R^{17})N(R^{17})S(O)_pR^{20}$ ,  $-C(R^{17})=NOR^{15}$ ,  $-C(R^{17})=NR^{17}$ ,  $-C(R^{17})=NN(R^{18})R^{19}$ ,  $-C(=NR^{17})N(R^{18})R^{19}$ , alkyl, haloalkyl, cycloalkyl, heterocyclyl, aryl and heteroaryl;

$R^{31}$ ,  $R^{32}$ ,  $R^{33}$  and  $R^{34}$  are each independently optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl or optionally substituted cycloalkyl; all of which may be optionally substituted with one to ten substituents each independently selected from a group consisting of oxo, halo, pseudohalo, nitro, cyano, azido, amidino, guanidino,  $-OR^{15}$ ,  $-OR^{16}OR^{15}$ ,  $-N(R^{18})R^{19}$ ,  $-N(R^{17})N(R^{18})R^{19}$ ,  $-SR^{15}$ ,  $-SR^{16}SR^{15}$ ,  $-S(O)_pR^{20}$ ,  $-N(R^{17})S(O)_pR^{20}$ ,  $-N(R^{17})N(R^{17})S(O)_pR^{20}$ ,  $-OC(J)R^{15}$ ,  $-NR^{17}C(J)R^{15}$ ,  $-OC(J)N(R^{18})R^{19}$ ,  $-NR^{17}C(J)N(R^{18})R^{19}$ ,  $-NR^{17}C(J)OR^{15}$ ,  $-OC(J)OR^{15}$ ,  $-P(R^{21})_2$ ,  $-P(O)(R^{21})_2$ ,  $-OP(O)(R^{21})_2$ ,  $-C(J)R^{15}$ ,  $-C(J)OR^{15}$ ,  $-C(J)SR^{16}$ ,  $-C(J)N(R^{18})R^{19}$ ,  $-C(J)N(R^{17})N(R^{18})R^{19}$ ,  $-C(J)N(R^{17})S(O)_pR^{20}$ ,  $-C(J)N(R^{17})N(R^{17})S(O)_pR^{20}$ ,  $-C(R^{17})=NOR^{15}$ ,  $-C(R^{17})=NR^{17}$ ,  $-C(R^{17})=NN(R^{18})R^{19}$ ,  $-C(=NR^{17})N(R^{18})R^{19}$ , alkyl, cycloalkyl, heterocyclyl, aryl and heteroaryl, and  $R^{34}$  can additionally be hydrogen;

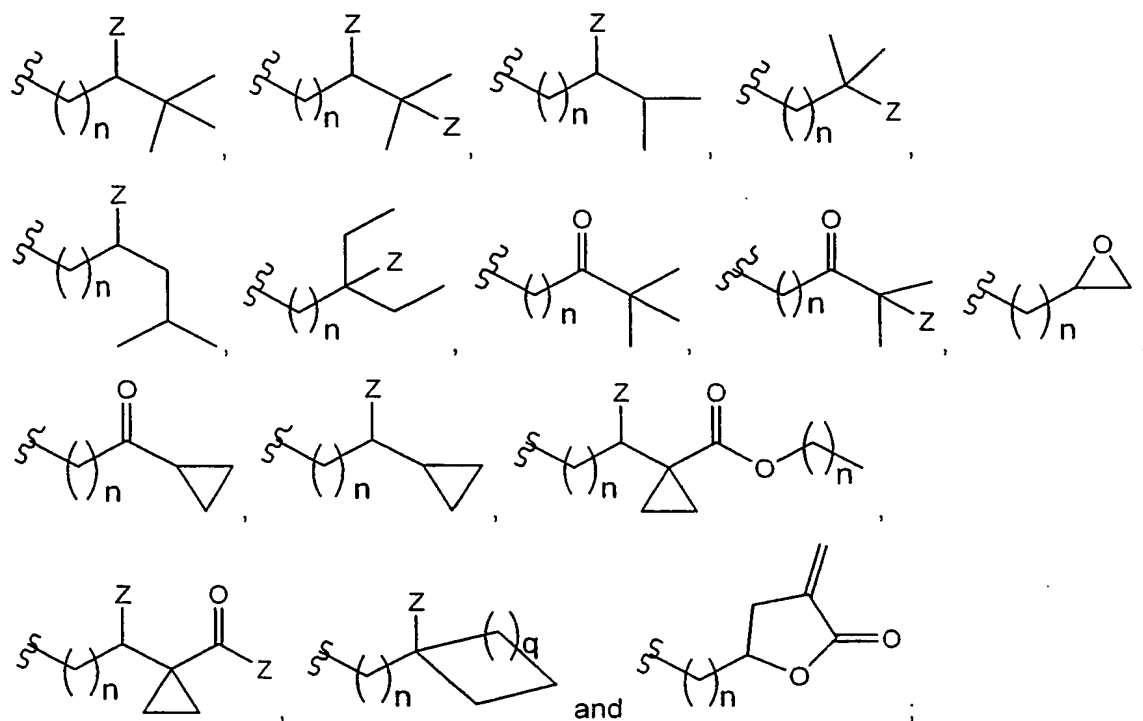
where  $R^{15}$ ,  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ ,  $R^{19}$ ,  $R^{20}$  and  $R^{21}$  are as described in Claim 1.

3. The compound of Claim 2 wherein  $R^{25}$ ,  $R^{30}$ ,  $R^{31}$ ,  $R^{32}$ ,  $R^{33}$  and  $R^{34}$  are each independently optionally substituted alkyl selected from group a) or group b), optionally substituted alkenyl selected from group c) or group d) or optionally substituted alkynyl selected from group e) or group f);

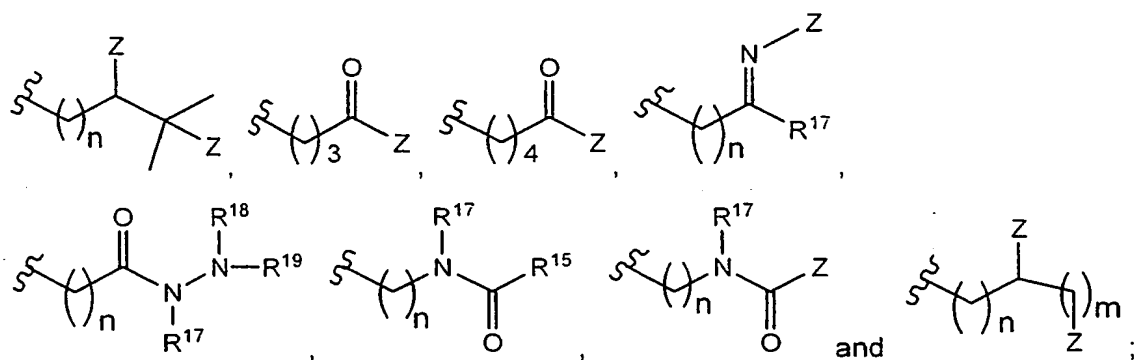
wherein  $R^{31}$ ,  $R^{32}$ ,  $R^{33}$  and  $R^{34}$  can additionally be optionally substituted cycloalkyl selected from group g);

and wherein  $R^{34}$  can additionally be hydrogen;

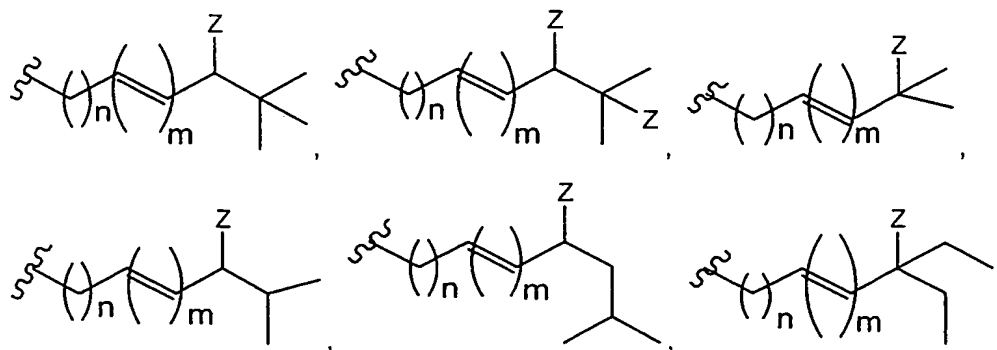
wherein group (a) consists of:

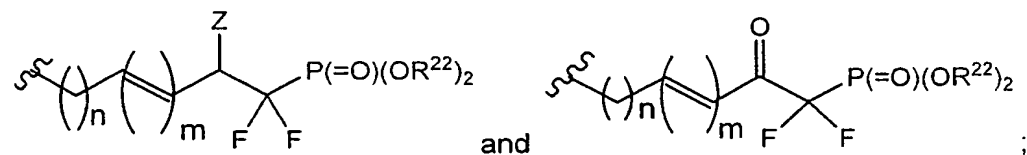
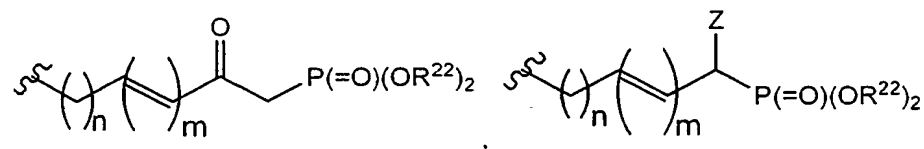
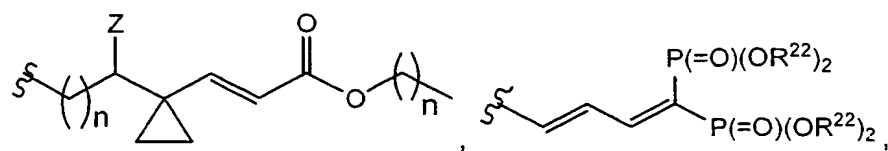
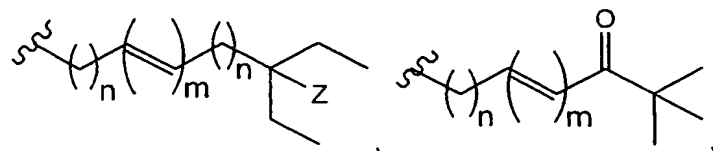
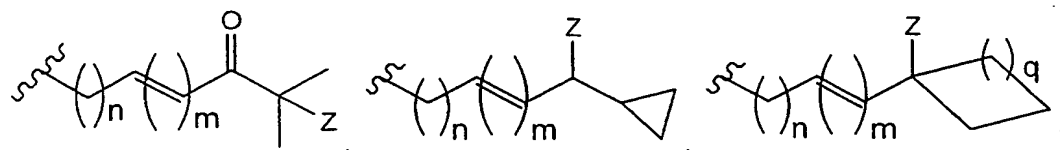


wherein group (b) consists of:

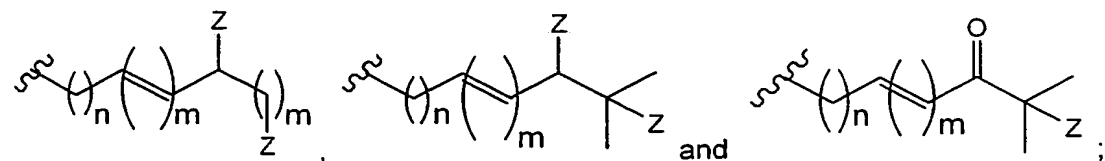


wherein group (c) consists of both *cis* and *trans* conformations of:



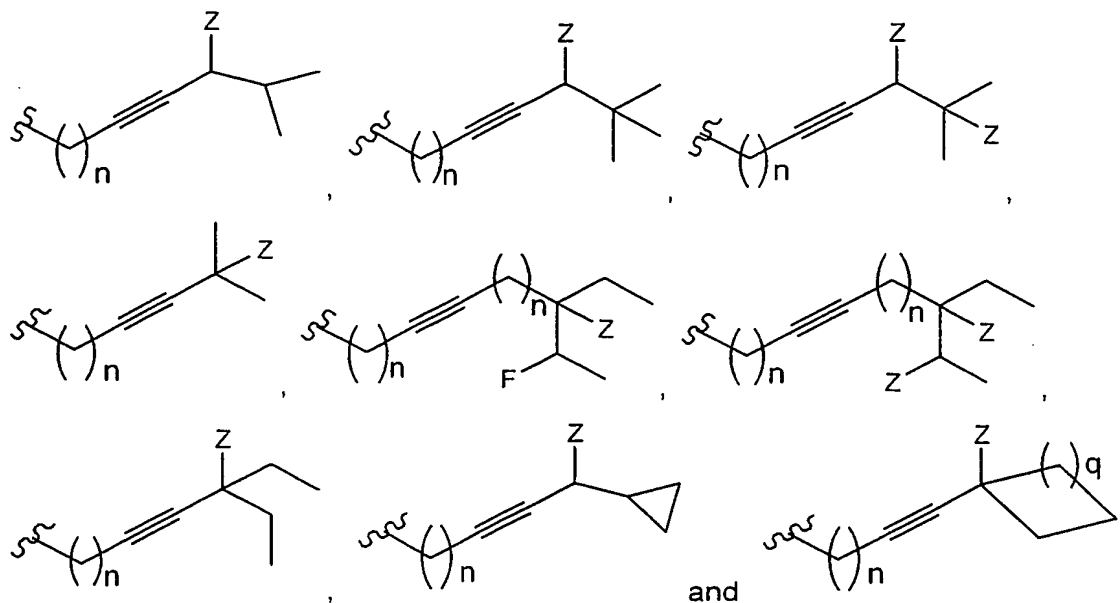


and group (d) consists of both *cis* and *trans* conformations of:

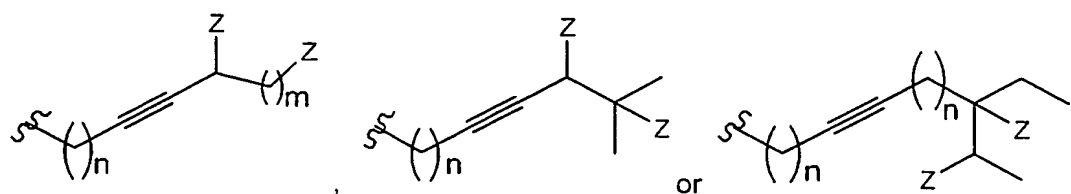


wherein group (e) consists of:

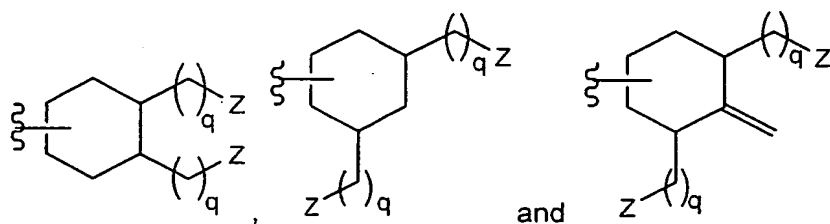




wherein group (f) consists of:



and wherein group (g) consists of:



wherein each Z is independently OH, OR,  $\text{NH}_2$ , NHR,  $\text{N(R)(R)}$  wherein R is each independently alkyl or haloalkyl; each n is independently an integer from 0 to 4; each m is independently an integer from 1 to 2 and each q is independently an integer from 0 to 4;

and wherein any member of groups a), b) c), d), e), f) and g) may optionally be halogenated.

4. The compound of claim 3 wherein:

X is  $\text{R}^{25}$ ;

Y is  $\text{---SR}^{32}$  or  $\text{---N(R}^{33}\text{)(R}^{34}\text{)}$ ;

$\text{R}^1$  and  $\text{R}^2$  are each independently alkyl or haloalkyl;

$R^3$  and  $R^4$  are each independently hydrogen, halo, pseudohalo, alkyl or haloalkyl;

$R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$ ,  $R^9$ ,  $R^{10}$  are hydrogen; and

$R^{25}$ ,  $R^{32}$ ,  $R^{33}$  and  $R^{34}$  are as described in claim 3.

5. The compound of claim 3 wherein:

X is  $R^{25}$ ;

Y is  $-OR^{31}$ ;

$R^1$  and  $R^2$  are each independently alkyl or haloalkyl;

$R^3$  and  $R^4$  are each independently hydrogen, halo, pseudohalo, alkyl or haloalkyl;

$R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$ ,  $R^9$ ,  $R^{10}$  are hydrogen; and

$R^{25}$  and  $R^{31}$  are as described in claim 3.

6. The compound of claim 5 wherein  $R^{25}$  is optionally substituted alkyl selected from group (a) and  $R^{31}$  is optionally substituted alkyl selected from group (b).

7. The compound of claim 6 wherein  $R^3$  and  $R^4$  are each independently halo, alkyl or haloalkyl.

8. The compound of claim 7 wherein the compounds are selected from a group consisting of:

3-(4-{1-ethyl-1-[4-(3-hydroxy-3-methylbutyl)-3-methylphenyl]-propyl}-2-methylphenoxy)-propane-1,2(S)-diol;

3-(4-{1-ethyl-1-[4-(3-ethyl-3-hydroxypentyl)-3-methylphenyl]-propyl}-2-methylphenoxy)-propane-1,2(S)-diol;

3-(4-{1-ethyl-1-[4-(3-hydroxy-5-methylhexyl)-3-methylphenyl]-propyl}-2-methylphenoxy)-propane-1,2(S)-diol;

3-(4-{1-ethyl-1-[4-(3-hydroxy-4-methylpentyl)-3-methylphenyl]-propyl}-2-methylphenoxy)-propane-1,2(S)-diol;

3-(2-ethyl-4-{1-ethyl-1-[4-(3-hydroxy-4,4-dimethylpentyl)-3-methylphenyl]-propyl}-phenoxy)-propane-1,2(S)-diol;

3-(4-{1-ethyl-1-[4-(3-hydroxy-4,4-dimethylpentyl)-3-methylphenyl]-propyl}-2-methylphenoxy)-propane-1,2(S)-diol;

3-[4-(1-ethyl-1-{4-[3(S)-hydroxy-4,4-dimethylpentyl]-3-methylphenyl}-propyl)-2-methylphenoxy]-propane-1,2(S)-diol; and

3-[4-(1-ethyl-1-[4-(3(*R*)-hydroxy-4,4-dimethylpentyl]-3-methylphenyl)-propyl)-2-methylphenoxy]-propane-1,2(*S*)-diol.

9. The compound of claim 6 wherein  $R^3$  is hydrogen or halo and  $R^4$  is alkyl, halo or haloalkyl.

10. The compound of claim 9 wherein the compound is:  
3-(4-{1-ethyl-1-[4-(3-hydroxy-4,4-dimethylpentyl)-phenyl]-propyl}-2-methylphenoxy)-propane-1,2(*S*)-diol.

11. The compound of claim 6 wherein  $R^3$  is alkyl, halo or haloalkyl and  $R^4$  is hydrogen or halo.

12. The compound of claim 11 wherein the compound is:  
3-(4-{1-ethyl-1-[4-(3-hydroxy-4,4-dimethylpentyl)-3-methylphenyl]-propyl}-phenoxy)-propane-1,2(*S*)-diol.

13. The compound of claim 5 wherein  $R^{25}$  is optionally substituted alkenyl selected from group (c) or group (d) and  $R^{31}$  is optionally substituted alkyl selected from group (a) or group (b).

14. The compound of claim 13 wherein  $R^3$  and  $R^4$  are each independently alkyl or haloalkyl.

15. The compound of claim 14, selected from the group consisting of:  
(*Z*)-3-(4-{1-ethyl-1-[4-(3-hydroxy-4,4-dimethylpent-1-enyl)-3-methylphenyl]-propyl}-2-methylphenoxy)-propane-1,2(*S*)-diol;  
(*E*)-3-(4-{1-ethyl-1-[4-(3-hydroxy-4,4-dimethylpent-1-enyl)-3-methylphenyl]-propyl}-2-methylphenoxy)-propane-1,2(*S*)-diol; and  
(*E*)-3-(4-{1-ethyl-1-[4-(3-ethyl-3-hydroxypent-1-enyl)-3-methylphenyl]-propyl}-2-methylphenoxy)-propane-1,2(*S*)-diol.

16. The compound of claim 13 wherein  $R^3$  is alkyl or haloalkyl and  $R^4$  is hydrogen or halo.

17. The compound of claim 5 wherein  $R^{25}$  is optionally substituted alkynyl selected from group (e) or group (f) and  $R^{31}$  is optionally substituted alkyl selected from group (a) or group (b).

18. The compound of claim 17 wherein  $R^3$  and  $R^4$  are each independently alkyl or haloalkyl.

19. The compound of claim 18 selected from the group consisting of  
3-(4-{1-ethyl-1-[4-(3-hydroxy-4,4-dimethylpent-1-ynyl)-3-methylphenyl]-propyl}-2-methylphenoxy)-propane-1,2(S)-diol;

3-(4-{1-ethyl-1-[4-(3(R)-hydroxy-4,4-dimethylpent-1-ynyl)-3-methylphenyl]-propyl}-2-methylphenoxy)-propane-1,2(S)-diol;

3-(4-{1-ethyl-1-[4-(3(S)-hydroxy-4,4-dimethylpent-1-ynyl)-3-methylphenyl]-propyl}-2-methylphenoxy)-propane-1,2(S)-diol; and

3-(4-{1-ethyl-1-[4-(3-ethyl-3-hydroxypent-1-ynyl)-3-methylphenyl]-propyl}-2-methylphenoxy)-propane-1,2(S)-diol.

20. The compound of claim 1 wherein:

X is  $R^{25}$ ;

Y is  $R^{30}$ ; and

$R^{25}$  and  $R^{30}$  are as described in claim 1.

21. The compound of Claim 20 wherein:

$R^1$  and  $R^2$  are each independently optionally substituted alkyl or haloalkyl;

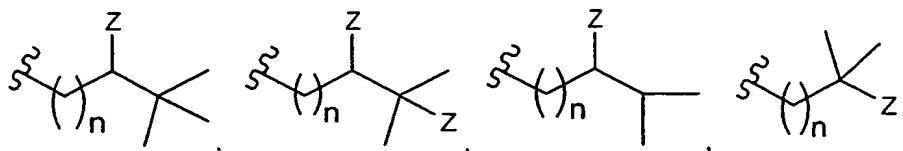
$R^3$  and  $R^4$  are each independently hydrogen, halo, pseudohalo, alkyl or

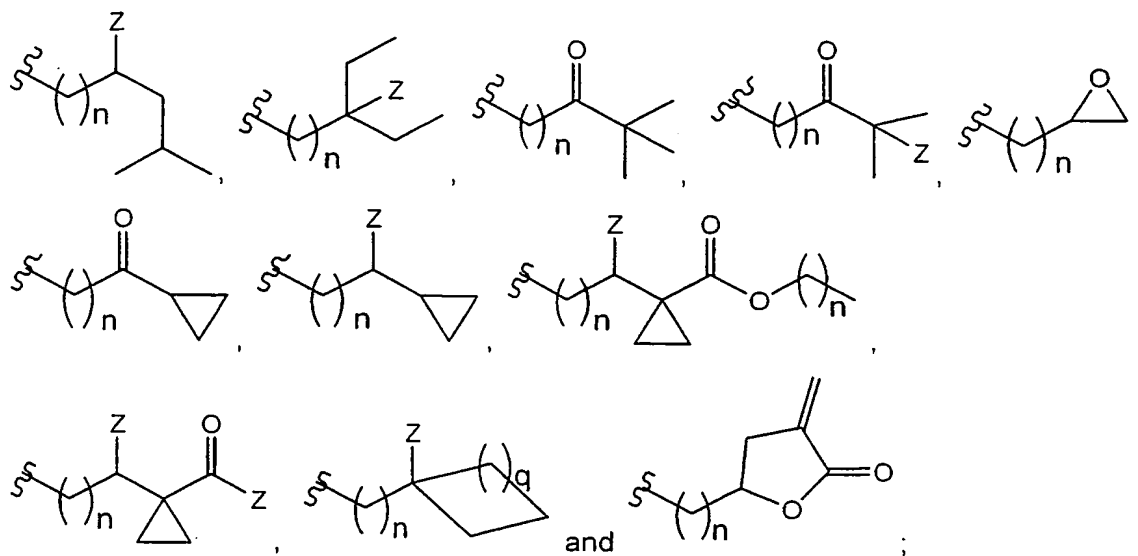
haloalkyl;

$R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$ ,  $R^9$ ,  $R^{10}$  are hydrogen;

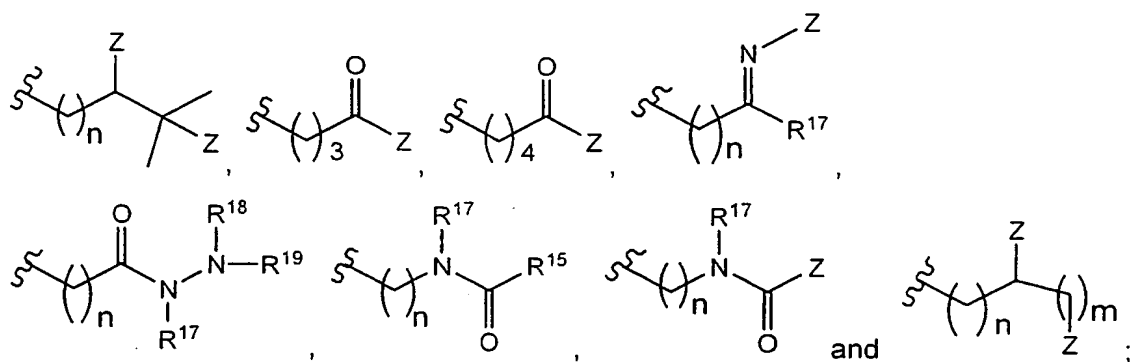
$R^{25}$  and  $R^{30}$  are each independently substituted alkyl selected from group a) or group b), substituted alkenyl selected from group c) or group d) or substituted alkynyl selected from group e) or group f);

wherein group (a) consists of:

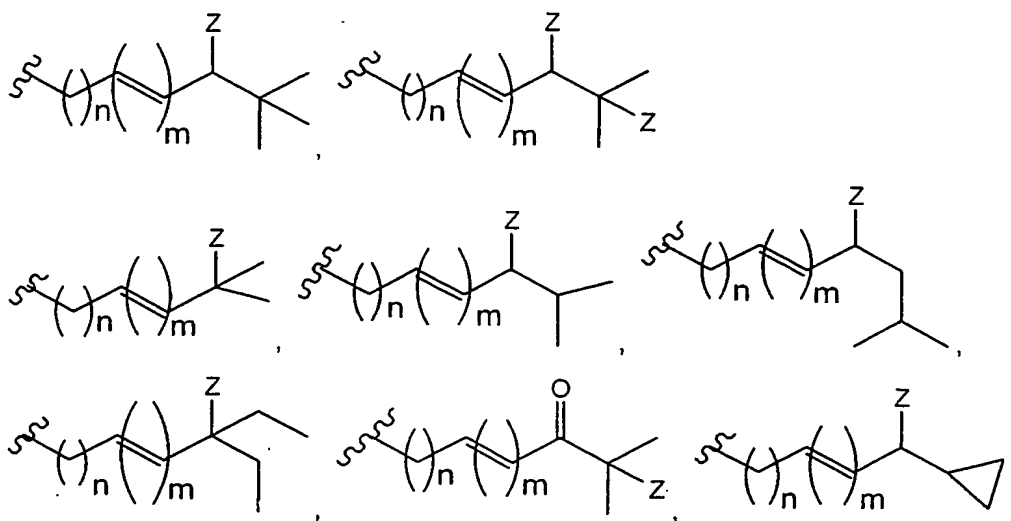


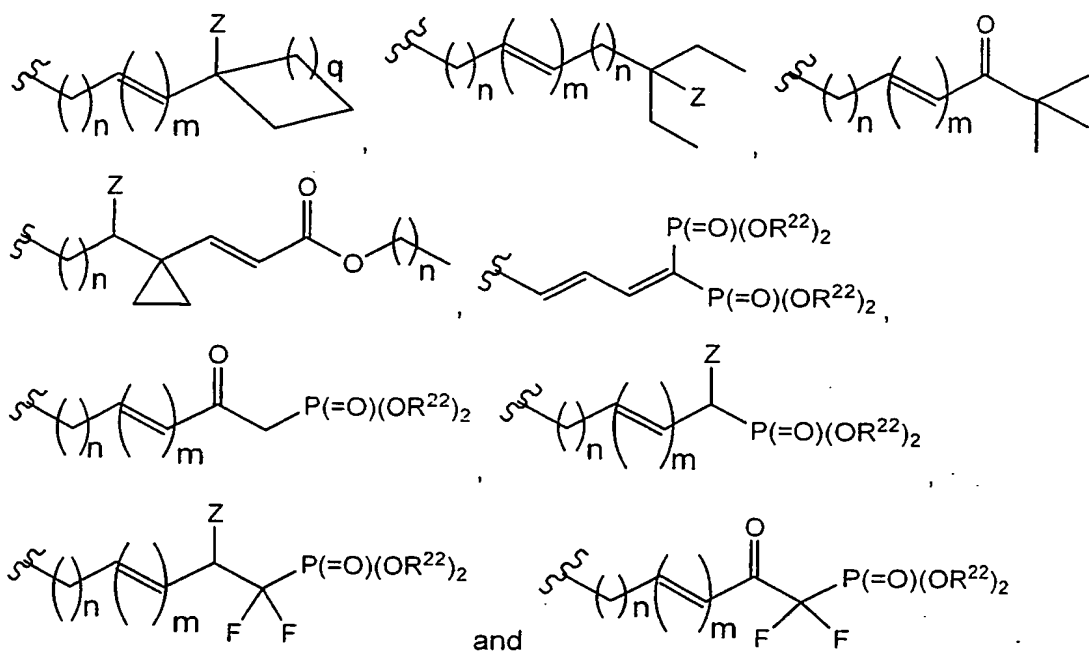


wherein group (b) consists of:

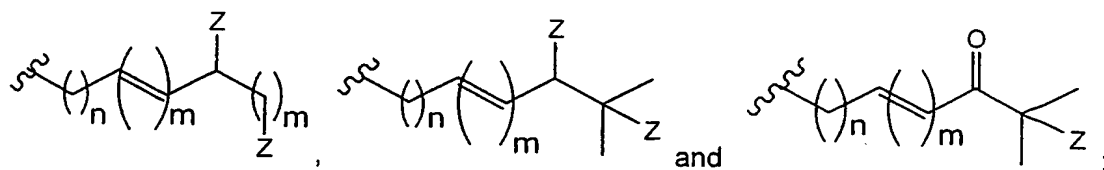


wherein group (c) consists of both *cis* and *trans* conformations of:

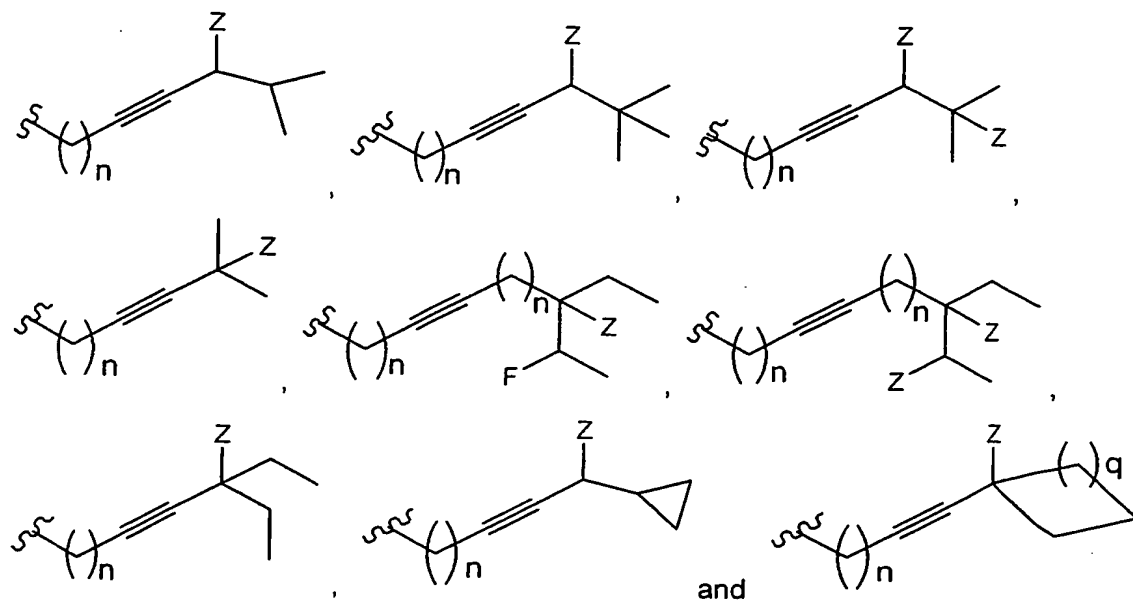




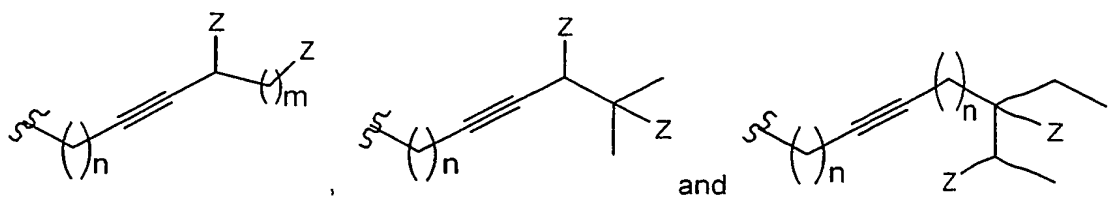
wherein group (d) consists of both *cis* and *trans* conformations of:



wherein group (e) consists of:



wherein group (f) consists of:



wherein each Z is independently OH, OR, NH<sub>2</sub>, NHR, N(R)(R) wherein R is independently alkyl or haloalkyl; each n is independently an integer from 0 to 4; each m is independently an integer from 1 to 2 and each q is independently an integer from 0 to 4;

and wherein any member of groups a), b) c), d), e), f) and g) may optionally be halogenated.

22. The compound of Claim 21 wherein R<sup>25</sup> is optionally substituted alkyl selected from group a), optionally substituted alkenyl selected from group c) or optionally substituted alkynyl selected from group e) and R<sup>30</sup> is optionally substituted alkyl selected from group b).

23. The compound of claim 22 wherein R<sup>3</sup> and R<sup>4</sup> are each independently alkyl or haloalkyl.

24. The compound of claim 22 wherein R<sup>3</sup> is alkyl or haloalkyl and R<sup>4</sup> is hydrogen.

25. The compound of Claim 1 wherein

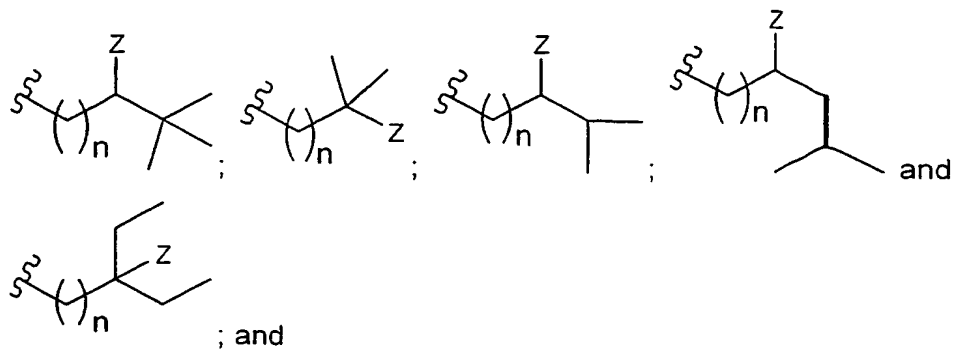
X is R<sup>25</sup>;

Y is -OR<sup>31</sup>;

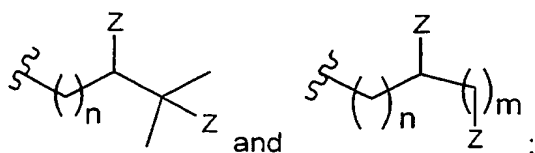
R<sup>1</sup> and R<sup>2</sup> are ethyl;

R<sup>3</sup> and R<sup>4</sup> are methyl;

R<sup>25</sup> is selected from the group consisting of:



$R^{31}$  is selected from the group consisting of:



wherein each Z is independently OH, OR,  $NH_2$ , NHR,  $N(R)(R)$  wherein R is independently alkyl or haloalkyl; each n is independently an integer from 0 to 4 and each m is independently an integer from 1 to 2.

26. The compound of Claim 1 wherein:

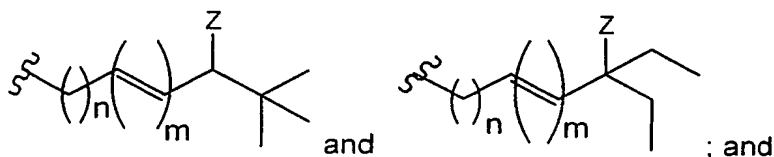
X is  $R^{25}$ ;

Y is  $-OR^{31}$ ;

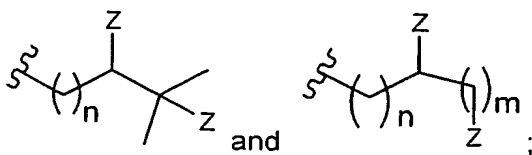
$R^1$  and  $R^2$  are ethyl;

$R^3$  and  $R^4$  are methyl;

$R^{25}$  is selected from the group consisting of both *cis* and *trans* conformations of:



$R^{31}$  is selected from the group consisting of both *cis* and *trans* conformations of:



wherein each Z is independently OH, OR,  $NH_2$ , NHR,  $N(R)(R)$  wherein R is independently alkyl or haloalkyl; each n is independently an integer from 0 to 4 and each m is independently an integer from 1 to 2.

27. The compound of Claim 1 wherein:



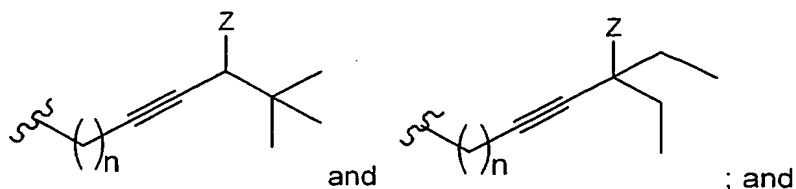
X is R<sup>25</sup>;

Y is -OR<sup>31</sup>;

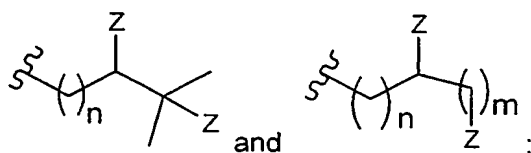
R<sup>1</sup> and R<sup>2</sup> are ethyl;

R<sup>3</sup> and R<sup>4</sup> are methyl;

R<sup>25</sup> is selected from the group consisting of:



R<sup>31</sup> is selected from the group consisting of:



wherein each Z is independently OH, OR, NH<sub>2</sub>, NHR, N(R)(R) wherein R is independently alkyl or haloalkyl; each n is independently an integer from 0 to 4 and each m is independently an integer from 1 to 2.

28. A pharmaceutical composition comprising a compound of claim 1 and one or more additional ingredient selected from the group consisting of an anticancer agent, an anti-autoimmune agent, a parathyroid hormone, a calcium supplement, an anti-arthritic compound, an anti-inflammatory compound, a matrix metalloproteinase inhibitor, an inhibitor of pro-inflammatory cytokines, an NSAID, a corticosteroid, a COX-1 inhibitor, a COX-2 inhibitor, acetaminophen and ibuprofen.

29. A method of treating, preventing or ameliorating one or more symptoms of disease or disorder in which vitamin D receptor activity is implicated, comprising administering to a subject in need thereof an effective amount of a compound of claim 1.

30. The method of claim 29 wherein the disease or disorder is selected from the group consisting of hyperparathyroidism, renal failure, osteomalacia, intestinal malabsorption syndrome, osteoporosis, Alzheimers disease, hyperproliferative skin diseases, psoriasis, pruritis, acne and seborrheic dermatitis.

31. The method of treating, preventing or ameliorating one or more symptoms of breast cancer colon cancer, prostate cancer, ovarian cancer, brain glial tumors, squamous cell carcinoma, ovarian cancer, myeloid leukemia, osteosarcoma; myelofibrosis and melanoma comprising administering to a subject in need thereof an effective amount of a compound of claim 1.

32. The method of claim 31 wherein said method further comprises administering one additional active ingredient selected from a group comprising 5-fluoro-uracil, methotrexate, fludarabine, antimicrotubule agents, vincristine, vinblastine, taxanes, paclitaxel, docetaxel, alkylating agent, cyclophosphamide, melphalan, biochemoethylnitrosurea, hydroxyurea, platinum agents, cisplatin, carboplatin, oxaliplatin, JM-216, CI-973, anthracyclines, doxorubicin, daunorubicin, antibiotics, mitomycin, idarubicin, adriamycin, daunomycin), topoisomerase inhibitors, etoposide, camptothecins, or any other cytotoxic agents, estramustine phosphate, prednimustine, steroids, anti-steroids, estrogens, anti-estrogens, androgens, anti-androgens, glucocorticoids and dexamethasone.

33. The method of claim 32 wherein said method further comprises the administration of a compound of claim 1 in conjunction with chemotherapy or radiation therapy.